

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

SEMESTER- 3 EXAMINATION – WINTER 2012

Subject code: 132001

Date: 05/01/2013

Subject Name: Industrial Drafting

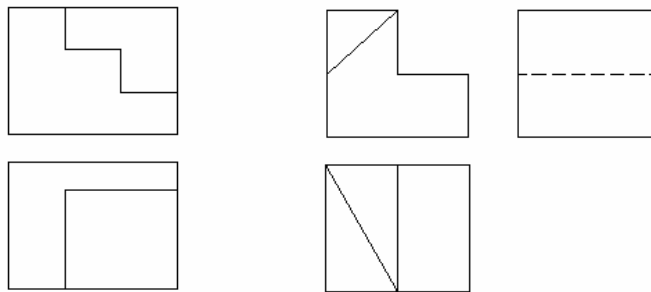
Time: 10:30 – 01:30

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** Differentiate between right and left hand threads. Explain the coupler nut with neat sketch. **07**
- (b)** Draw missing line or lines, full or dotted, in the orthographic views of the objects **07** shown in Figure below. The answer must be supported by the rough sketch of an isometric view of the objects, without which no credit will be given for the answer.



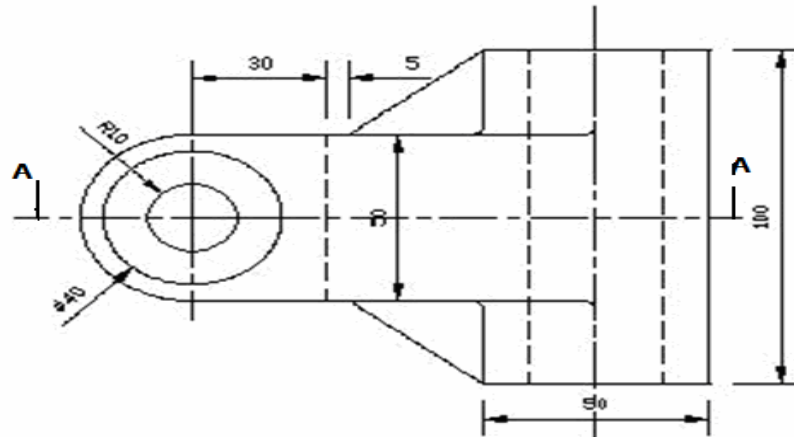
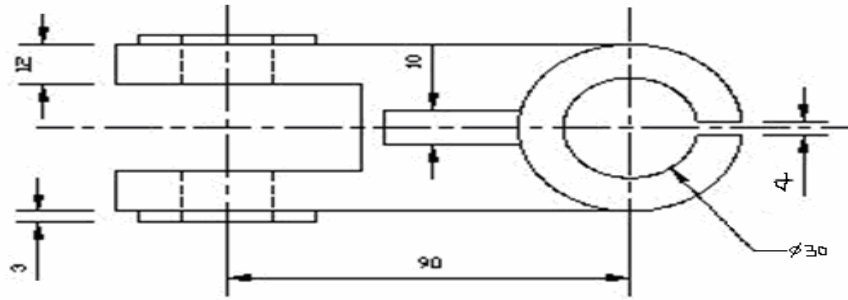
- Q.2 (a)** Explain various types of nuts with their specific applications. **07**
- (b)** A vertical square prism, base 50 mm side is completely penetrated by a horizontal square prism, base 35 mm side so that their axes are 6 mm apart. The axis of the horizontal prism is parallel to the V.P., while the faces of both prisms are equally inclined to the V.P. Draw the projections of the prism showing lines of intersection. **07**

OR

- (b)** A vertical cylinder of 70 mm diameter and 80 mm in height is penetrated by another cylinder of the same size. The axis of the penetrating cylinder is parallel to both the H.P. and the V.P. and is 9 mm away from the axis of the vertical cylinder. Draw the projections showing curves of intersection. **07**
- Q.3 (a)** Explain the eye foundation bolt and rag foundation with neat sketches. **07**
- (b)** Mention various types of keys and explain any two of them in detail. **07**

OR

- Q.3 (a)** Draw the standards symbols for : **06**
1. straightness tolerance
 2. circularity tolerance
 3. parallelism tolerance
- (b)** Draw according to the first-angle projection method: **08**
1. Sectional front view, along section A-A
 2. side view from the left



Q.4 (a) Draw the sketch for the conventional representation of steel, white metal (as a metal) and cork (as an insulator). **07**

(b) Mention at least seven commands of modify tool box and explain any two of them in detail. **07**

OR

Q.4 (a) Draw the sketch for the conventional representation of worm, splined Shaft and external screw threads. **07**

(b) Prepare a dimensional sketch of a Cotter Joint. Take Rod cross section 30X30 mm. **07**

Q.5 (a) What is meant by direction of lay? How is it shown on a drawing? Sketch the symbols related to the common directions of lay. **07**

(b) 1. Calculate the fundamental tolerance for a shaft of 100 mm and grade 7. **03**

Use geometrical mean $D=98$ mm and following table:

Grade	IT7	IT8	IT9	IT10	IT11	IT12
Tolerance Value	16i	25i	40i	64i	100i	160i

2. Explain the minimum and maximum interference fit with example. **04**

OR

Q.5 List down a procedure used step by step in context of AUTO CAD to drawing the following figure. **14**

